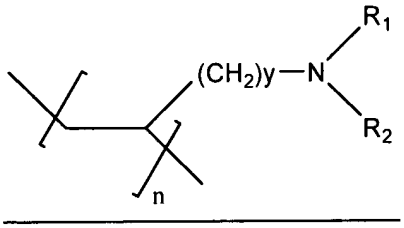
CLAIMS

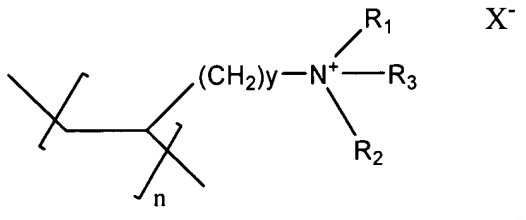
Please amend the claims as follows:

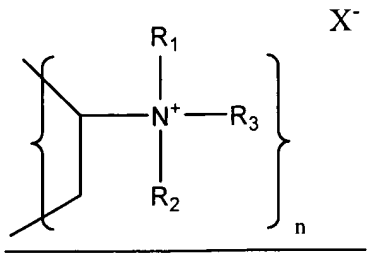
1. (Cancelled).

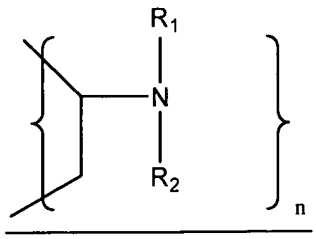
2. (Currently Amended). A method for promoting bone formation in a mammal in need thereof by administering to the mammal a therapeutically effective amount of at least one amine polymer with the proviso that said mammal is not suffering from hyperparathyroidism, hyperphosphatemia or osteitis fibrosa; wherein

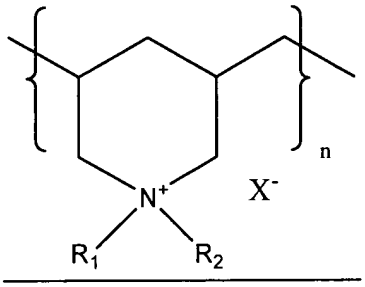
(a) said amine polymer comprises a repeat unit having a formula selected from the group consisting of:

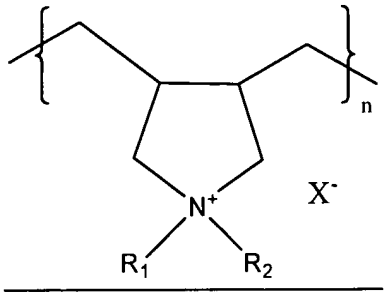


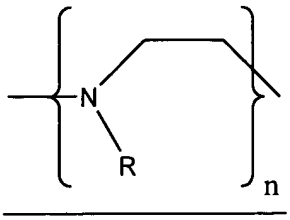


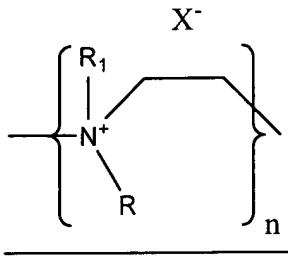

X-
R1
N+
R3
R2
n


R1
N
R2
n


n
X-
N+
R1
R2


n
X-
N+
R1
R2


N
R
n



or a salt or a copolymer thereof, where n is a positive integer and y is an integer of one or more, each R, R_1, R_2 and R_3, independently, is H or a substituted or unsubstituted alkyl group, and X^- is an exchangeable negatively charged counterion,

(b) said amine polymer is cross-linked by means of a multifunctional cross-linking agent, and

(c) said multifunctional cross-linking agent is present in an amount from about 0.5-25% by weight, based upon the combined weight of monomer and cross-linking agent.

3-6. (Cancelled).

7. (Currently Amended). The method of ~~Claim 6~~ Claim 2 wherein the multifunctional cross-linking agent is present in an amount from about 2.5-20% by weight, based upon the combined weight of monomer and cross-linking agent.

8. (Currently Amended). The method of ~~Claim 5~~ Claim 2 wherein said cross-linking agent comprises epichlorohydrin.

9. (Currently Amended). The method of ~~Claim 5~~ Claim 2 wherein the polymer is a homopolymer.

10. (Original). The method of Claim 9 wherein the polymer is a polyallylamine.

11. (Original). The method of Claim 9 wherein the polymer is a polydiallylamine.

12. (Original). The method of Claim 9 wherein the polymer is a polyvinylamine.

13. (Currently Amended). The method of ~~Claim 4~~ Claim 2 wherein at least one of R, R_1, R_2, and R_3 in each formula is hydrogen.

14. (Original). The method of Claim 2 wherein the polymer is administered with one or more meals.

15-42. (Cancelled).

43. (New). The method of Claim 2 wherein said amine polymer is a copolymer.

44. (New). The method of Claim 43 wherein said copolymer comprises non-amine containing monomers.

45. (New). The method of Claim 2 wherein said amine polymer is administered as a salt.

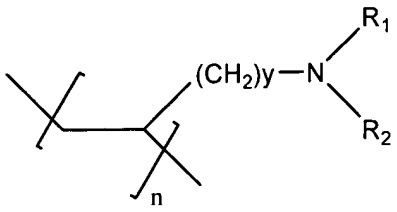
46. (New). The method of Claim 45 wherein said salt comprises chloride.

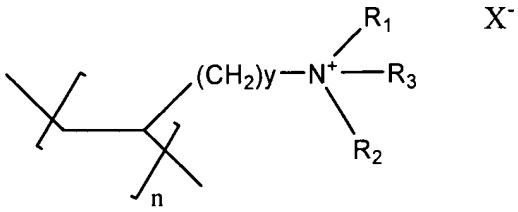
47. (New). The method of Claim 45 wherein said salt comprises carbonate.

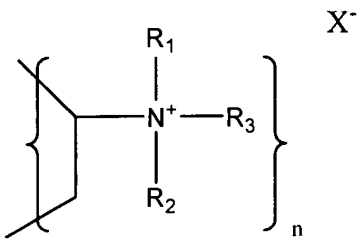
48. (New). The method of Claim 2 wherein said therapeutically effective amount of said amine polymer is administered to said mammal in the form of a pharmaceutical composition comprising said amine polymer and a pharmaceutically acceptable carrier or diluent.

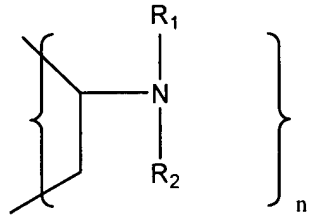
49. (New). A method of treating a mammal suffering from osteoporosis by administering to the mammal a therapeutically effective amount of at least one amine polymer with the proviso that said mammal is not suffering from hyperparathyroidism, hyperphosphatemia or osteitis fibrosa; wherein

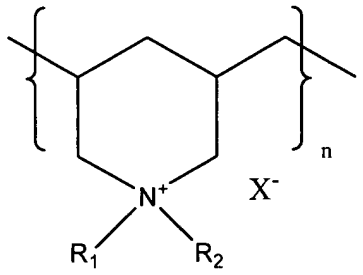
(a) said amine polymer comprises a repeat unit having a formula selected from the group consisting of:

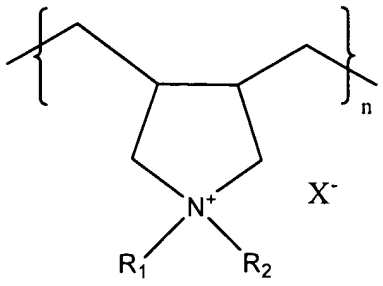

R1
(CH2)y
N
R2
n

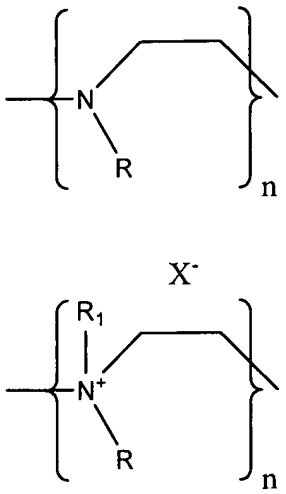

R1
X-
(CH2)y
N+
R3
R2
n


X-
R1
N+
R3
R2
n


R1
N
R2
n


n
N+
X-
R1
R2


n
N+
X-
R1
R2



or a salt or a copolymer thereof, where n is a positive integer and y is an integer of one or more, each R, R_1, R_2 and R_3, independently, is H or a substituted or unsubstituted alkyl group, and X^- is an exchangeable negatively charged counterion,

(b) said amine polymer is cross-linked by means of a multifunctional cross-linking agent, and

(c) said multifunctional cross-linking agent is present in an amount from about 0.5-25% by weight, based upon the combined weight of monomer and cross-linking agent.

50. (New). The method of Claim 49 wherein the multifunctional cross-linking agent is present in an amount from about 2.5-20% by weight, based upon the combined weight of monomer and cross-linking agent.

51. (New). The method of Claim 49 wherein said cross-linking agent comprises epichlorohydrin.

52. (New). The method of Claim 49wherein the polymer is a homopolymer.

53. (New). The method of Claim 52 wherein the polymer is a polyallylamine.

54. (New). The method of Claim 52 wherein the polymer is a polydiallylamine.

55. (New). The method of Claim 52 wherein the polymer is a polyvinylamine.

56. (New). The method of Claim 49 wherein at least one of R, R_1, R_2, and R_3 in each formula is hydrogen.

57. (New). The method of Claim 49 wherein the polymer is administered with one or more meals.

58. (New). The method of Claim 49 wherein said amine polymer is a copolymer .

59. (New). The method of Claim 49 wherein said copolymer comprises non-amine containing monomers.

60. (New). The method of Claim 49 wherein said amine polymer is administered as a salt.

61. (New). The method of Claim 60 wherein said salt comprises chloride.

62. (New). The method of Claim 60 wherein said salt comprises carbonate.

63. (New). The method of Claim 49 wherein said therapeutically effective amount of said amine polymer is administered to said mammal in the form of a pharmaceutical composition comprising said amine polymer and a pharmaceutically acceptable carrier or diluent.